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<b>TRANSMITTAL FORM</b> <i>(to be used for all correspondence after initial filing)</i>	Application Number	10/771,152
	Filing Date	February 4, 2004
	First Named Inventor	GOPAL, Ravi B.
	Art Unit	2857
	Examiner Name	
Total Number of Pages in This Submission	Attorney Docket Number	9351-382

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) <div>Remarks</div>	<input type="checkbox"/> After Allowance Communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) <i>(please identify below):</i> <b>Return receipt card; and Copies of foreign patent documents and non-patent literature documents cited in IDS.</b>

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Ian C. McMillan, Registration No. 43,390
Signature	
Date	July 7, 2004

CERTIFICATE OF TRANSMISSION/MAILING			
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July 7, 2004



Ian C. McMillan B.Sc. (Math & Eng.), LL.B., LL.M.  
416 957 1644 - imcmillan@bereskinparr.com

Your Reference: 10/771,152  
Our Reference: 9351-382

## INFORMATION DISCLOSURE STATEMENT

The Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia  
U.S.A 22313-1450

Dear Sir:

**Re: United States Patent Application No. 10/771,152**  
**For: SYSTEM AND METHOD FOR MEASURING INTERNAL**  
**RESISTANCE OF ELECTROCHEMICAL DEVICES**  
**Applicant: GOPAL, Ravi B.**

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In accordance with 37 CFR 1.56 and 1.97, subject to the waiver of the requirements of 37 CFR 1.98(a)(2)(i) provided by the United States Patent and Trademark Office Notice dated August 5, 2003, applicant hereby submits an Information Disclosure Statement including (1) a listing, on PTO form 1449, all patents and other publications of which the applicant is aware that may be considered material to the patentability of its claimed invention, and (2) a copy of the foreign patent documents and the non-patent literature documents listed on the Information Disclosure Statement.

Please have these documents recorded against the above-mentioned application.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Ian C. McMillan".

Ian C. McMillan  
Registration No. 43,390

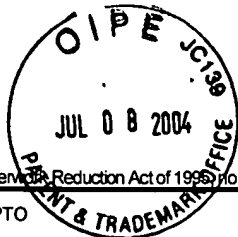
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Waterloo, Ontario, Canada N2L 3V3  
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PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031  
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

**Complete if Known**

Application Number	10/771,152
Filing Date	February 4, 2004
First Named Inventor	Ravi B. Gopal
Art Unit	2857
Examiner Name	
Attorney Docket Number	9351-382

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	US- 3,676,770	07-11-1972	Sharaf et al.	
	2	US- 3,753,094	08-14-1973	Furuishi et al.	
	3	US- 4,071,819	01-31-1978	De Santis	
	4	US- 4,316,185	02-16-1982	Watrous et al.	
	5	US- 4,352,067	09-28-1982	Ottone	
	6	US- 4,484,140	11-20-1984	Dieu	
	7	US- 4,697,134	09-29-1987	Burkum et al.	
	8	US- 4,743,855	05-10-1998	Randin et al.	
	9	US- 4,972,181	11-20-1990	Fiene	
	10	US- 5,047,722	09-10-1991	Wurst et al.	
	11	US- 5,170,124	12-08-1992	Blair et al.	
	12	US- 5,281,920	01-25-1995	Wurst	
	13	US- 5,416,416	05-16-1995	Bisher	
	14	US- 5,608,307	03-04-1997	Garrett et al.	
	15	US- 5,670,861	09-23-1997	Nor	
	16	US- 5,712,568	01-27-1998	Flohr et al.	
	17	US- 5,773,978	06-30-1998	Becker	
	18	US- 5,914,606	06-22-1999	Becker-Irvin	
	19	US- 5,923,148	07-13-1999	Sideris et al.	
	20	US- 6,002,238	12-14-1999	Champlin	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	21	JP01160367	06-23-1989	Toshiba Electric Equip Corp.		
	22	JP2000092732	03-31-2000	Denso Corp.		
	23	JP359215674	12-05-1984	Sanyo Electric Co Ltd		
	24	WO 99/18448	04-15-1999	Guardian Link Limited		
	25	WO 00/31557	06-02-2000	Korea Kumho Petrochemical Co., Ltd.		
	26	WO 01/09631	02-08-2001	Elliott Industries Ltd.		
	27	WO 01/14898	03-01-2001	Plug Power, Inc.		
	28	WO 02/03086	01-10-2002	Ballard Power Systems Inc.		
	29	WO 02/27342	04-04-2002	Hydrogenics Corporation		

Examiner  
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Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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*(Use as many sheets as necessary)*

Sheet	3	of	3
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**Complete if Known**

<b>Application Number</b>	10/771,152
<b>Filing Date</b>	February 4, 2004
<b>First Named Inventor</b>	Ravi B. Gopal
<b>Art Unit</b>	2857
<b>Examiner Name</b>	
<b>Attorney Docket Number</b>	9351-382

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	33	US- 6,011,379	01-04-2000	Singh et al.	
	34	US- 6,037,777	03-14-2000	Champlin	
	35	US- 6,140,820	10-31-2000	James	
	36	US- 6,160,382	12-12-2000	Yoon et al.	
	37	US- 6,239,579	05-29-2001	Dunn et al.	
	38	US- 6,281,684	08-28-2001	James	
	39	US- 6,285,164	09-04-2001	Noda et al.	
	40	US- 6,297,618	10-02-2001	Emori et al.	
	41	US- 6,307,350	10-23-2001	Alderman	
	42	US- 6,313,750	11-06-2001	Lacy	
	43	US- 6,335,611	01-01-2002	Sasaki	
	44	US- 6,406,806	06-18-2002	Keskula et al.	
	45	US- 6,417,670	07-09-2002	Kang	
	46	US- 6,432,569	08-13-2002	Zeilinger et al.	
	47	US- 6,455,180	09-24-2002	Mowery et al.	
	48	US- 6,519,539	02-11-2003	Freeman et al.	
	49	US- 2002/0051899	05-02-2002	Keskula et al.	
	50	US- 2002/0053896	05-09-2002	Adams et al.	
	51	US- 2002/0180447	12-05-2002	Masse et al.	
	52	US- 2002/0196025	12-26-2002	Freeman et al.	

[illegible]

**Examiner  
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Sheet 2 of 3

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Application Number	10/771,152
Filing Date	February 4, 2004
First Named Inventor	Ravi B. Gopal
Art Unit	2857
Examiner Name	
Attorney Docket Number	9351-382

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	30	T. E. Springer, T. A. Zawodzinski, M.S. Wilson and S. Gottesfield, "Characterization of polymer electrolyte fuel cells using AC impedance spectroscopy", Journal of the electrochemical Society of America, 143(2), p. 587-599, 1996	
	31	J.R. Selman and Y.P. Lin, "Application of AC impedance in fuel cell research and development", Electrochimica Acta, 38(14), p. 2063-2073, 1993	
	32	B. Elsener and H. Bolmi, "Computer-assisted DC and AC techniques in electrochemical investigations of the active-passive transition", Corrosion Science, 23(4), p. 341-352, 1983	

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